

ABSTRACT

A process of manufacturing dispersion strengthened copper (DSC) and/or hyper-nucleated metal matrix composite (HNMMC) resistance welding electrodes directly from a sintered powdered metal compact pre-form, and the electrode formed by the process. A major amount of DSC and/or HNMMC may be alloyed with a minor amount of a non-ferrous metal powder, such as silver, wherein to change a physical property of the final product, and the pre-form thus formed then cold formed or thixomolded into its final net shape.